401 KAR 61:035. Existing process gas streams.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Department for Natural Resources
Division of Air Pollution

Relates to: KRS Chapter 224
Pursuant to: 224.10-100
Necessity and Function: KRS 224.10-100 requires the Department for Natural Resources and Environmental Protection to prescribe regulations for the prevention, abatement, and control of air pollution. This regulation provides for the control of emissions from existing process gas streams.

Section 1. Applicability.
The provisions of this regulation shall apply to each affected facility which means any process gas stream which:

(1) Is not elsewhere subject to a standard of performance within this chapter with respect to hydrogen sulfide, sulfur dioxide, or carbon monoxide;

(2) Commenced before the classification date defined below;

(3) Emits hydrogen sulfide or sulfur dioxide and is located in a county classified as Class I or VA with respect to sulfur dioxide;

(4) Emits carbon monoxide generated during the operation of any gray iron cupola, blast furnace, basic oxygen steel furnace, coal conversion plants, catalyst regeneration of a petroleum cracking system, or other petroleum process and is located in an area classified non-attainment with respect to carbon monoxide in 401 KAR 51:010.

Section 2. Definitions.
As used in this regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010 or 401 KAR 50:025.

(1) "Classification date" means the effective date of this regulation.

(2) "Process gas stream" means any gas stream emitted from any process, including, but not limited to, petroleum refineries, by-product coke plants, gray iron cupolas, blast furnaces, coal conversion plants and basic oxygen steel furnaces, except process upset gas as defined in this section and the combustion products of purchased coke oven gas.

(3) "Process upset gas" means any gas generated by a process unit as a result of startup, shutdown, upset, or malfunction.

(4) "Process unit" means any segment of the plant in which a specific processing operation is conducted.

Section 3. Standard for Hydrogen Sulfide.
No person shall cause, suffer, allow or permit the emission of combustion of hydrogen sulfide in a process gas stream to exceed ten (10) grains per 100 dscf (165 ppm by volume) at zero percent oxygen.

Section 4. Standard for Sulfur Dioxide.
No person shall cause, suffer, allow or permit the emission of sulfur dioxide in a process gas stream to exceed 239 grains per 100 dscf (2,000 ppm by volume) at zero percent oxygen.

Section 5. Standard for Carbon Monoxide.
No person shall cause, suffer, allow, or permit the emission of carbon

monoxide in a process gas stream or a waste gas stream, unless the gases are burned at 1,300 oF for 0.5 seconds or greater in a direct flame afterburner or equivalent device equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

Section 6. Test Methods and Procedures.
Except as provided in 401 KAR 50:045, performance tests used to demonstrate compliance with Sections 3 and 4 shall be conducted according to the following methods (filed by reference in 401 KAR 50:015):

(1) Reference Method 11 for hydrogen sulfide. The sample shall be drawn from a point near the centroid of the gas line. The minimum sampling time shall be ten (10) minutes and the minimum sample volume 0.01 dscm (0.35 dscf) for each sample. The arithmetic average of two (2) samples shall constitute one (1) run. Samples shall be taken at approximately one (1) hour intervals.

(2) Reference Method 6 for sulfur dioxide. Reference Method 1 shall be used for velocity traverses and Reference Method 2 for determining velocity and volumetric flow rate. The sampling site for determining SO_2 concentration by Reference Method 6 shall be at the centroid of the cross section or at a point no closer to the walls than one (1) m (thirty-nine (39) inches) if the cross- sectional area is five (5) square meters or more and the centroid is more than one (1) meter from the wall. The sample shall be extracted at a rate proportional to the gas velocity at the sampling point. The minimum sampling time shall be ten (10) minutes and the minimum sampling volume 0.01 dscm (0.3 dscf) for each sample. Three (3) runs will constitute compliance test. Samples shall be taken at approximately one (1) hour intervals.

Section 7. Compliance Timetable.
Those affected facilities subject to the standards in this regulations shall achieve compliance with those standards within eighteen (18) months of the effective date of this regulation.

(1) Hydrogen sulfide and sulfur dioxide. The provisions of Sections 3 and 4 are applicable upon the effective date of this regulation with respect to affected facilities located in counties classified as Class I with respect to sulfur dioxide. The owner or operator of an affected facility located in a Class VA county with respect to sulfur dioxide shall be required to complete the following:
   (a) Submit a final control plan for achieving compliance with Sections 3 and 4 no later than September 1, 1979.

   (b) Award the control system contract no later than October 1, 1979.

   (c) Initiate on-site construction or installation of emission control equipment no later than September 1, 1980.

   (d) On-site construction or installation of emission control equipment shall be completed no later than December 1, 1980.

(2) Carbon monoxide. The owner or operator of an affected facility shall be required to complete the following:
   (a) Submit a final control plan for achieving compliance with Section 5 no later than September 1, 1979.

   (b) Award the control system contract no later than October 1, 1979.

   (c) Initiate on-site construction or installation of emission control equipment no later than July 1, 1980.

(d) On-site construction or installation of emission control equipment shall be completed no later than October 1, 1980.

(e) Final compliance shall be achieved no later than December 1, 1980.

Effective Date: April 07, 1982

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